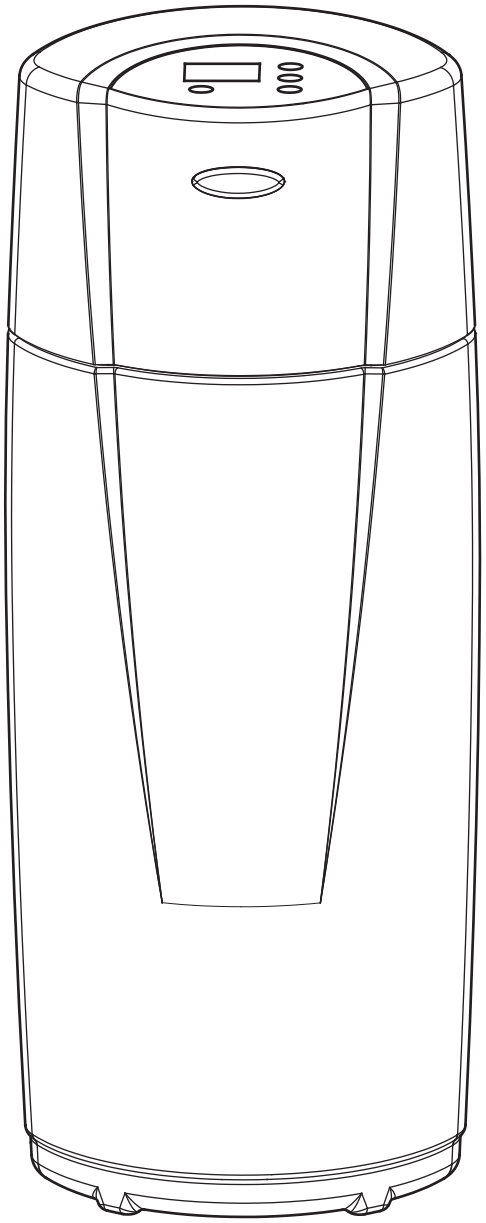
ecopure®

Model EPWHCW

Central Water Filtration System

How to install, operate and maintain your Central Water Filtration System



If you have any questions or concerns when installing, operating or maintaining your Central Water Filtration System, call our toll free number:

1-800-693-1138

Monday- Friday, 7 AM - 6 PM CST
or visit **www.ecopurewaterproducts.com**

When you call, please be prepared to provide the model, date code and serial number of your product, located on the rating decal on back of the cover.

Systems tested and certified by NSF International against NSF/ANSI Standard 42.
See performance data sheet for details.

NSF

Installation and Operation Manual

ENERGY STAR

Powered by an ENERGY STAR® qualified adapter for a better environment

Manufactured and warranted by
Ecodyne Water Systems LLC
1890 Woodlane Drive
Woodbury, MN 55125

Printed on recycled paper

7306774 (Rev. F 1/18/10)

TABLE OF CONTENTS

Central Water Filtration System Safety 3
Before You Start 3
Inspect Shipment 4
Central Water Filtration System Dimensions 5
How a Central Water Filtration System Works 6
- Normal Operation 6
- Clean Rinse Cycle 6
- Applications for a Central Water Filtration System 6

Installation Requirements 7
- Tools Needed 7
- Location Requirements 7
- Air Gap requirements 8
- Valve Drain Requirements 8

Plan the Installation 9
- Inlet - Outlet Plumbing Options 9

Installation Instructions 10
- Turn Off Water Supply 10
- Move the Central Water Filtration System into Place 10
- Assemble Inlet & Outlet Plumbing 11
- Install Valve Drain Hose 12
- Test for Leaks 12
- Turn On the Central Water Filtration System 12

Start Up Procedure 13
Programming the Central Water Filtration System 14
- Set Time of Day 14

Customizing Features / Options 15
- Start a Clean Rinse Cycle 15
- Set Number of Days Between Clean Rinse Cycles 15
- Set Clean Rinse Time 15
- Set Length of Clean Rinse 15
- Operating in Manual Clean Rinse Mode 16
- Power Outage Memory 16

Care of Your Central Water Filtration System 17
- Vacations & Extended Periods of No Water Use 17
- Protect the Central Water Filtration System from Freezing 17

Warranty 18
Troubleshooting 19
- Cleaning the Drain Flow Control 20
- Cleaning the Sediment Screen 21

Wiring Schematic 22
Specifications 22
Exploded View & Parts List 24

Questions?

Visit www.ecopurewaterproducts.com or call Toll Free 1-800-693-1138

Monday - Friday, 7 am - 6 pm CST

Central Water Filtration System Safety

Your safety and the safety of others are very important.

We have provided many safety messages in this manual and on your appliance. Always read and obey all safety messages.

This is the safety alert symbol.
This symbol alerts you to potential hazards that can kill or hurt you and others.
All safety messages will follow the safety alert symbol and either the word “DANGER” or “WARNING”
These words mean:

⚠DANGER — **You can be killed or seriously injured if you don’t <u>immediately</u> follow instructions.**

⚠WARNING — **You can be killed or seriously injured if you don’t follow instructions.**

All safety messages will tell you what the potential hazard is, tell you how to reduce the chance of injury, and tell you what can happen if the instructions are not followed.

In the state of Massachusetts: The Commonwealth of Massachusetts plumbing code 248-CMR shall be adhered to. A licensed plumber shall be used for this installation.

Before You Start

- See "Installation Requirements" section before installing Central Water Filtration System.
- Before you begin installation, read this entire manual. Then, obtain all the materials and tools you will need to make the installation. Check local plumbing and electrical codes.
- Use only lead-free solder and flux for all sweat-solder connections, as required by federal codes.
- Use care when handling the Central Water Filtration System. Do not turn upside down, drop, or set on sharp protrusions.
- Avoid installing in direct sunlight. Excessive sun heat may cause distortion or other damage to non-metallic parts.
- The Central Water Filtration System has a maximum allowable inlet water pressure of 125 psi and a minimum of 30 psi. If daytime pressure is over 80 psi, nighttime pressure may exceed the maximum. Use a pressure reducing valve if necessary (Adding a pressure reducing valve may reduce the flow.). If your home is equipped with a back flow preventer, an expansion tank must be installed in accordance with local codes and laws.
- The Central Water Filtration System works on 24 volt, 60 Hz electrical power only, supplied by a direct plug-in transformer (included). Be sure to use the included transformer and plug it into a nominal 120V, 60 cycle household outlet that is properly protected by an overcurrent device such as a circuit breaker or fuse. If transformer is replaced, use only the authorized service, Class II, 24V 10VA transformer.
- Do not use the Central Water Filtration System with water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system.

European Directive 2002/96/EC requires all electrical and electronic equipment to be disposed of according to Waste Electrical and Electronic Equipment (WEEE) requirements. This directive or similar laws are in place nationally and can vary from region to region. Please refer to your state and local laws for proper disposal of this equipment.

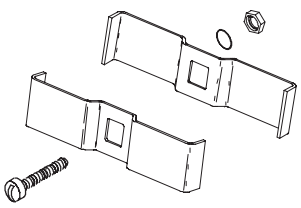
Inspect Shipment

The parts required to assemble and install the Central Water Filtration System are included with the unit.

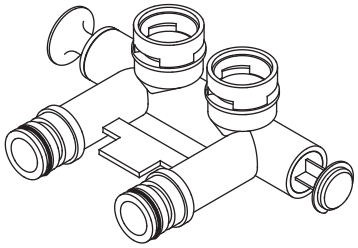
Thoroughly check the Central Water Filtration System for possible shipping damage and parts loss. Also inspect and note any damage to the shipping carton.

Remove and discard (or recycle) all packing materials. To avoid loss of small parts, we suggest you keep the small parts in the parts bag until you are ready to use them.

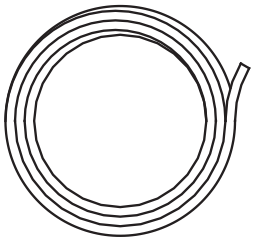
Packing List



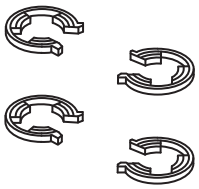
Ground Clamp Kit



Bypass Valve

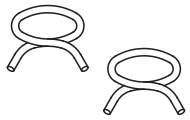


10 ft. Drain Hose

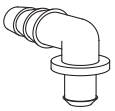


Clips

Installation Adaptors



Hose Clamps



Adaptor Elbow

FIG. 1

Do not return the Central Water Filtration System to store.

If you have any questions, or there are missing parts or damage, please call Toll Free 1-800-693-1138, Monday - Friday, 7 am - 6 pm CST.

Before you call please have your model number, and date of purchase ready.

Central Water Filtration System Dimensions

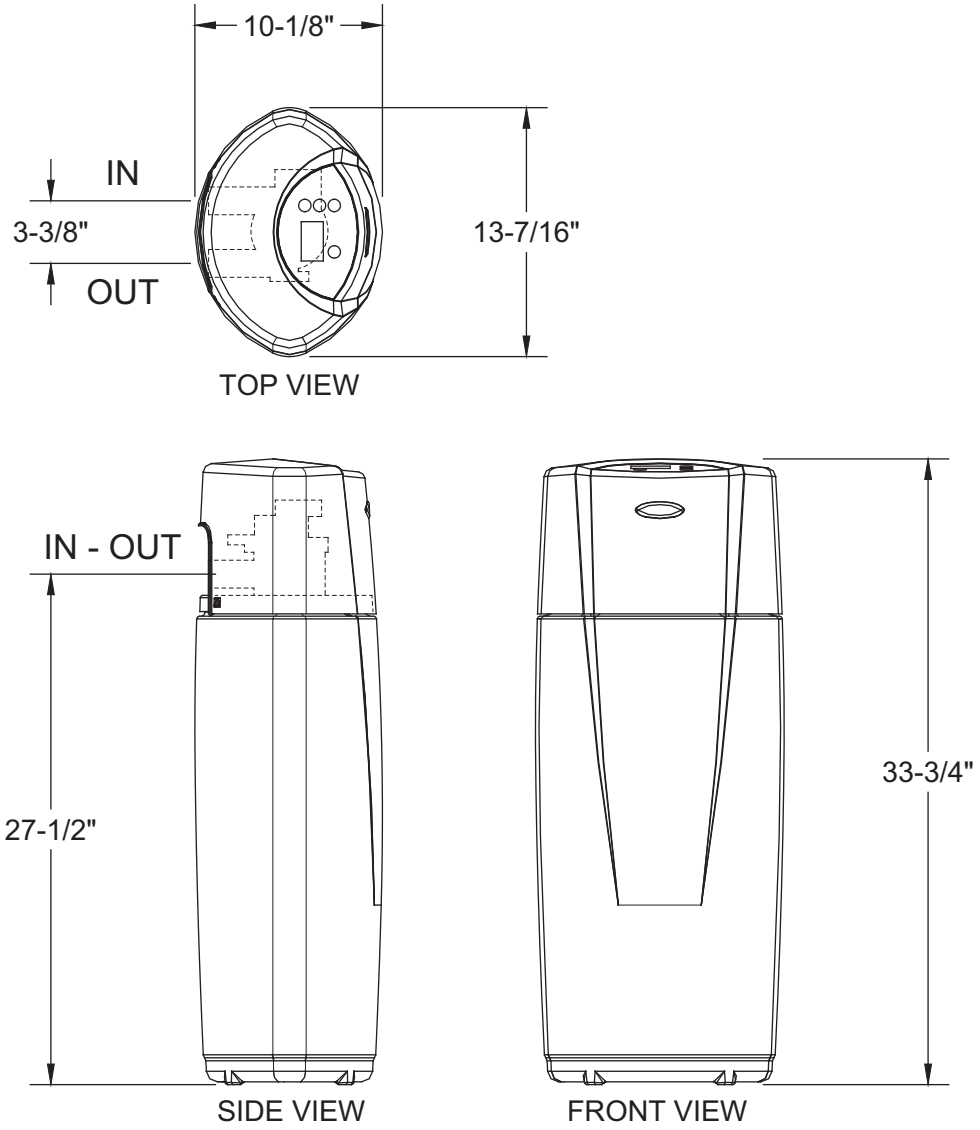


FIG. 2

For future reference, enter the following information.

Model No. _____ **Code** _____

Serial No. _____ **Installation Date** _____

Model No. and Serial No. are on the shipping carton and on the registration decal on the Central Water Filtration System. Code is on the registration decal.

How a Central Water Filtration System Works

NORMAL OPERATION

During normal operation water enters the Central Water Filtration System and flows through several filtration processes where tastes, odors and sediment are reduced.

CLEAN RINSE CYCLE

A Clean Rinse cycle will automatically be initiated based on how the controller has been programmed. The Clean Rinse cycle lifts and expands the media bed to rejuvenate the media and then repacks the bed for continued use. During the Clean Rinse cycle, dirt, sediment, etc. are flushed from the Central Water Filtration System down the drain.

APPLICATIONS FOR A CENTRAL WATER FILTRATION SYSTEM

- Do not use the Central Water Filtration System with water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system.
- The Central Water Filtration System may not be an effective treatment method for water sources with a hydrogen sulfide problem (rotten egg odor or taste) If your water has hydrogen sulfide, contact a water treatment expert or call 1-800-693-1138.
- The Central Water Filtration System will not remove iron and is not intended to replace iron treatment equipment.
- Although the Central Water Filtration System has sediment filter capabilities, additional sediment filtration may be needed in problem water applications.

Installation Requirements

TOOLS NEEDED

Assemble the required tools before starting installation. Read and follow instructions provided with any tools listed here.

- Screwdriver
- Tape measure
- Pliers

If using Soldered Copper Pipe

- Tubing cutter
- Lead-free solder and flux
- Propane torch
- Emery cloth, sandpaper or steel wool
- Misc. copper pipe fittings

If using Threaded Pipe

- Pipe cutter or hacksaw
- Pipe joint compound
- Threading tool
- Misc. threaded pipe fittings

If using CPVC Plastic

- Pipe cutter
- Solvent cement
- Hacksaw
- Primer
- Adjustable wrench

If using Other

- Other pipe and fittings suitable for potable water as required by piping system manufacturer and local codes and/or ordinances.

LOCATION REQUIREMENTS

Consider the following when selecting an installation location for the Central Water Filtration System.

- Do not operate the Central Water Filtration System where freezing temperatures occur. Do not attempt to treat water over 120ºF. Freezing temperatures or hot water damage voids the warranty.
- To condition all water in the home, install the Central Water Filtration System close to the water supply inlet, and before all other plumbing connections, except outside water pipes.
- A nearby drain is needed to carry away Clean Rinse discharge water. Use a floor drain, laundry tub, sump, standpipe, or other options (check your local codes). See "Air Gap Requirements" and "Valve Drain Requirements" sections. If a drain is not available, it is still possible to operate the Central Water Filtration System in a manual Clean Rinse mode. See “Operating in Manual Clean Rinse Mode.” The automatic Clean Rinse must be disabled if the Central Water Filtration System will not be connected to a drain (See Page 8).
- The Central Water Filtration System works on 24 volt, 60 Hz electrical power only, supplied by a direct plug-in transformer (included). Provide an electrical outlet in accordance with NEC and local codes.
- Do not install the Central Water Filtration System on a hot water line (See Figure 3 below).
- Install the Central Water Filtration System between the home’s incoming water supply and the water softener, if one is being used (See Figure 3).

THE PROPER ORDER TO INSTALL WATER TREATMENT EQUIPMENT

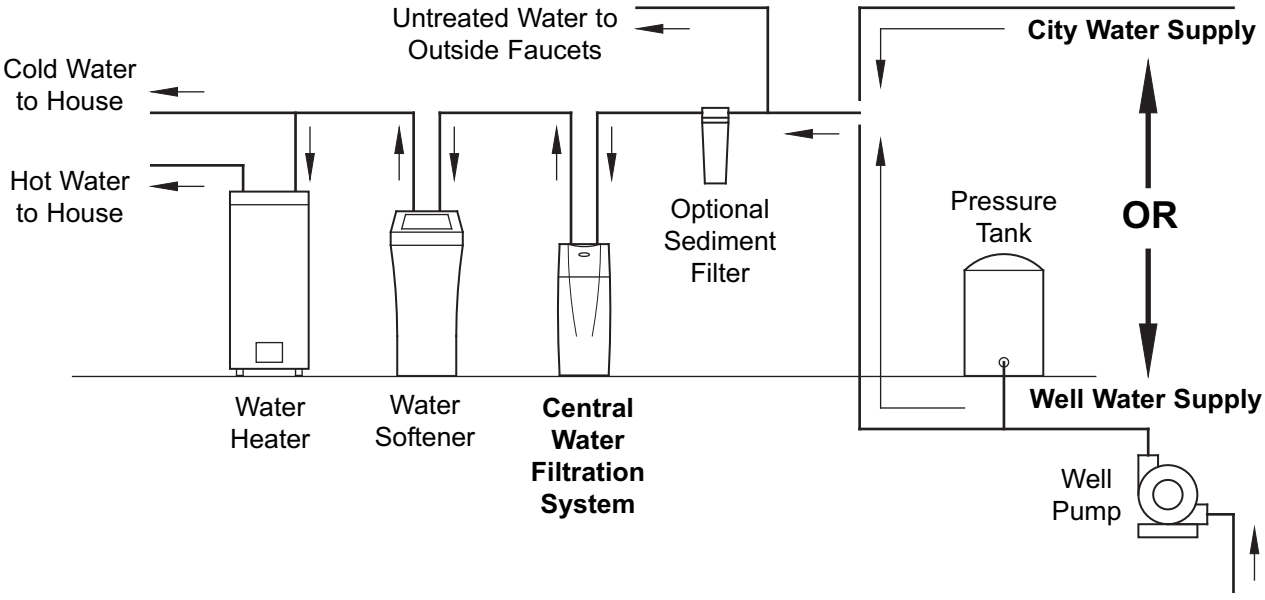


FIG. 3

Installation Requirements

PLUMBING CODES

All plumbing must be completed in accordance with national, state and local plumbing codes.

In the state of Massachusetts: The Commonwealth of Massachusetts plumbing code 248-CMR shall be adhered to. A licensed plumber shall be used for this installation.

AIR GAP REQUIREMENTS

A drain is needed for Clean Rinse discharge water. A floor drain, close to the Central Water Filtration System, is preferred. A laundry tub, standpipe, etc. are other drain options. Secure valve drain hose in place. Leave an air gap of 1-1/2” between the end of the hose and the drain. This gap is needed to prevent backflow of sewer water into the Central Water Filtration System . Do not put the end of the drain hose into the drain.

VALVE DRAIN REQUIREMENTS

Using the flexible drain hose (included), measure and cut to the length needed. Flexible drain hose is not allowed in all localities (check your plumbing codes). If local codes do not allow use of a flexible drain hose, a rigid valve drain run must be used. Purchase a compression fitting (1/4 NPT x 1/2 in. minimum tube) and 1/2" tubing from your local hardware store. Plumb a rigid drain as needed (see Figure 4, below).

NOTE: Avoid drain hose runs longer that 30 feet. Make the valve drain line as short and direct as possible.

It is recommended that the Central Water Filtration System be installed near a drain. However, if a drain is not available, it is still possible to operate the Central Water Filtration System in.a manual Clean Rinse mode. See “Operating in Manual Clean Rinse Mode” section. The automatic Clean Rinse function must be disabled if the Central Water Filtration System will not be connected to a drain.

CONNECTING VALVE TO DRAIN

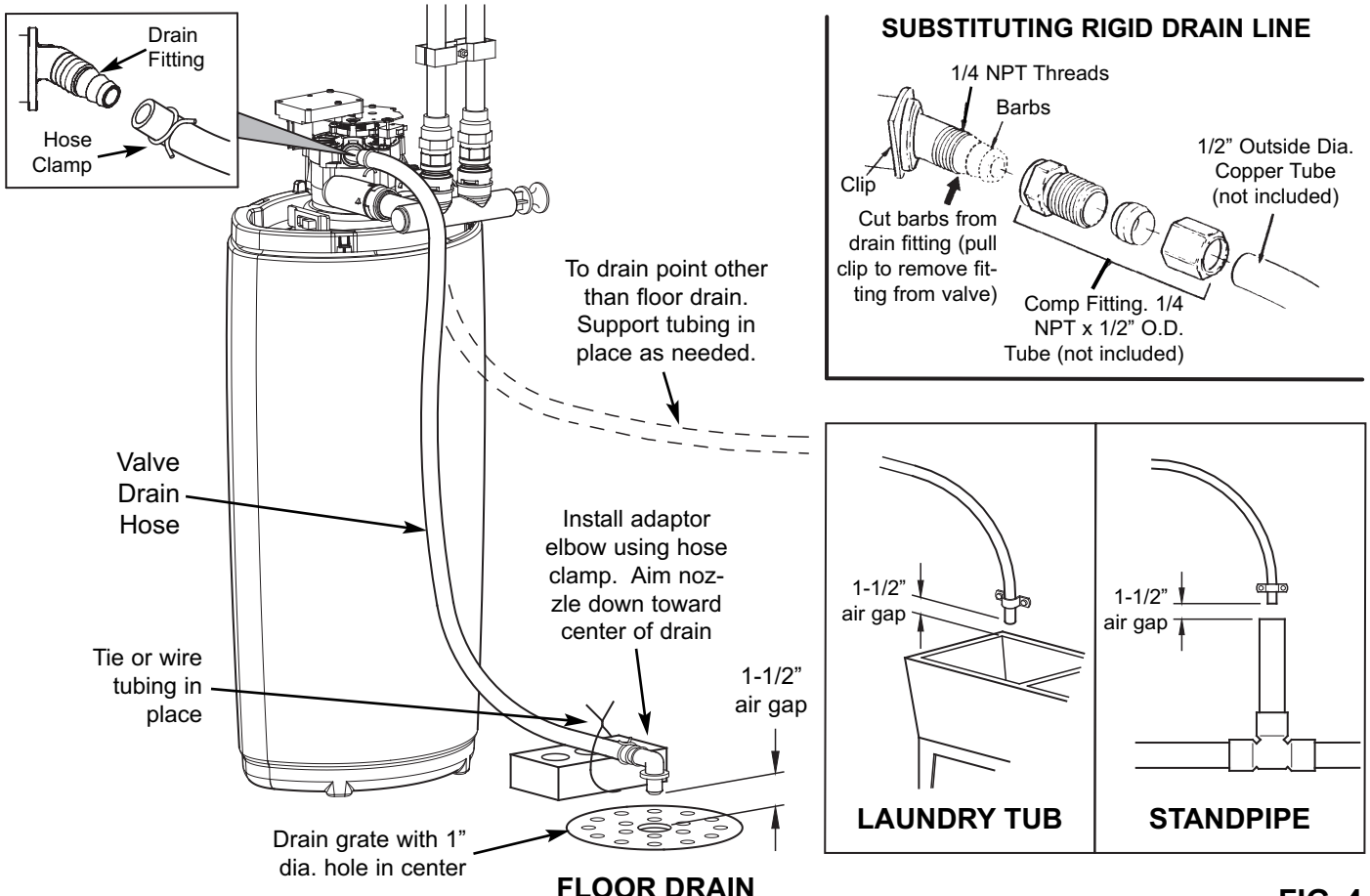

Drain Fitting
Hose Clamp
To drain point other than floor drain. Support tubing in place as needed.
Valve Drain Hose
Install adaptor elbow using hose clamp. Aim nozzle down toward center of drain
Tie or wire tubing in place
1-1/2” air gap
Drain grate with 1” dia. hole in center
FLOOR DRAIN
SUBSTITUTING RIGID DRAIN LINE
1/4 NPT Threads
Barbs
Clip
Cut barbs from drain fitting (pull clip to remove fitting from valve)
1/2” Outside Dia. Copper Tube (not included)
Comp Fitting. 1/4 NPT x 1/2” O.D. Tube (not included)
1-1/2” air gap
LAUNDRY TUB
1-1/2” air gap
STANDPIPE

FIG. 4

Plan the Installation

INLET - OUTLET PLUMBING OPTIONS

Install a single bypass valve (provided) to the contractor/plumber-supplied plumbing, as shown in Fig. 7 OR if desired, a 3 valve bypass system (parts not included) can be installed, as shown in Figure 6. Bypass valves allow you to turn off water to the Central Water Filtration System for maintenance if needed, but still have water in house pipes.

Use either:

- Copper pipe
- Threaded pipe
- PEX (Crosslinked Polyethylene) pipe
- CPVC plastic pipe
- Other pipe approved for use with potable water

IMPORTANT: Do not solder with plumbing attached to installation adapters and single valve bypass. Soldering heat will damage the adapters and valve.

CROSS OVER

In what direction does the water flow?

Be sure to plan piping so water flow is to the Central Water Filtration System valve INLET. Plan a crossover if flow is from left to right.

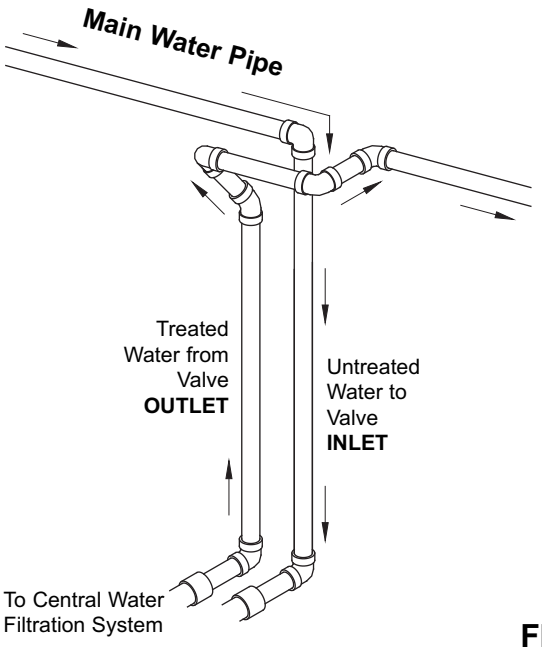


FIG. 5

3 VALVE BYPASS

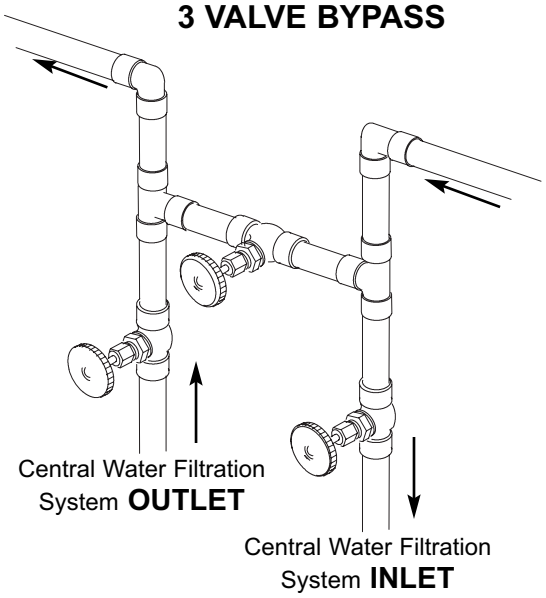
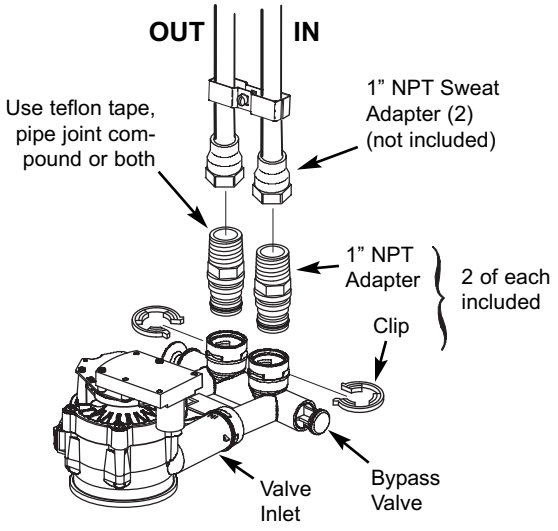


FIG. 6

CONNECTING PLUMBING TO VALVE



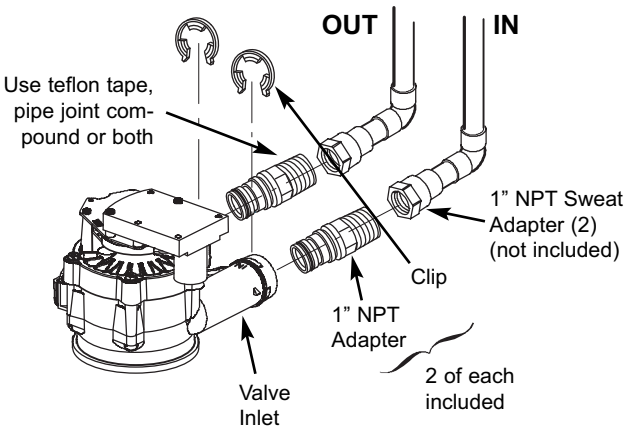


FIG. 7

Installation Instructions

TURN OFF WATER SUPPLY

1. Close the main water supply valve, near the well pump or water meter.
2. Open all faucets to drain water from the house pipes.

NOTE: Be sure not to drain water from the water heater, as damage to the water heater elements could result.

MOVE THE CENTRAL WATER FILTRATION SYSTEM INTO PLACE

⚠ WARNING

Excessive Weight Hazard

Use two or more people to move and install Central Water Filtration System.

Failure to do so can result in back or other injury.

1. Move the Central Water Filtration System into installation position. Set it on a level surface. If needed, place the unit on a section of plywood, a minimum of 5/8" thick. Then place shims under the plywood to level the Central Water Filtration System (see Figure 8).
2. Remove top cover.
3. Hang cover from post on front of rim, as shown in Figure 9. Avoid allowing cover to hang from wires.

LEVEL IF NECESSARY

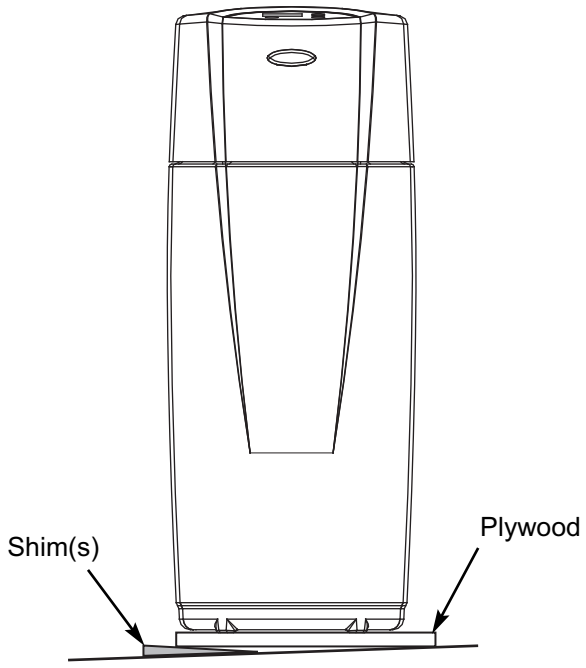


FIG. 8

REMOVE TOP COVER AND HANG IT FROM POST ON FRONT OF RIM

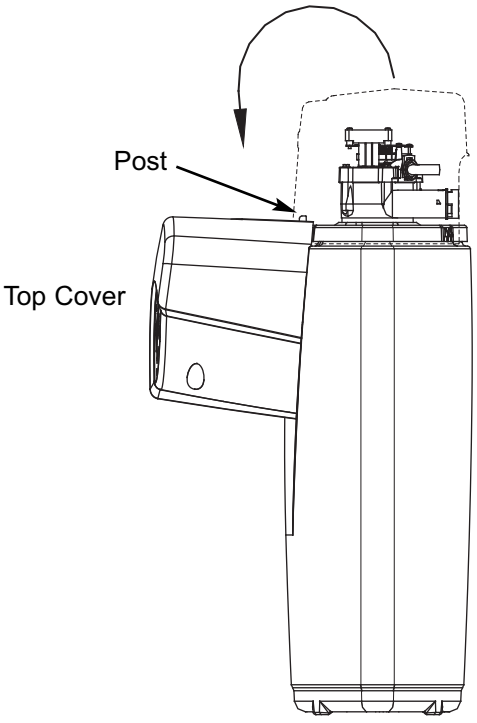


FIG. 9

Installation Instructions

ASSEMBLE INLET AND OUTLET PLUMBING

A ground clamp should be installed on the household plumbing supply lines in accordance with the National Electric Code.

⚠ WARNING

Electrical Shock Hazard

Install metal ground clamp to metal house water supply pipe before beginning installation.

Securely tighten connection in center of metal ground clamp.

Failure to do so can result in death or electrical shock.

1. Install metal grounding clamp to metal house water supply pipes before beginning installation.
2. Securely tighten connection in center of metal ground clamp (See Figure 10).
3. Loosely assemble any pipe and fittings needed from the main water supply to the inlet and outlet ports of the Central Water Filtration System valve.

IMPORTANT:

- Be sure to fit, align and support all plumbing to prevent putting stress on the Central Water Filtration System valve inlet and outlet. Undue stress from misaligned or unsupported plumbing may cause damage to the valve.
- Be sure to keep fittings fully together, and pipes squared and straight.
- Be sure incoming water supply pipe goes to the Central Water Filtration System valve INLET side. Inlet and outlet are marked on the valve. Trace the water flow direction to be sure.

4. Complete the inlet and outlet plumbing for the type of pipe as described at right:

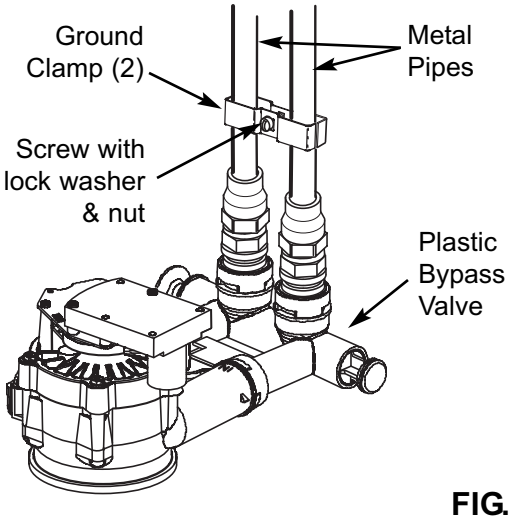


FIG. 10

Soldered Copper

1. Thoroughly clean and apply solder flux to all joints.
2. Make all solder connections.

IMPORTANT: Do not solder with plumbing attached to installation Adapters and single valve bypass. Soldering heat will damage the Adapters and valve.

Threaded Pipe

1. Apply pipe joint compound or Teflon® tape to all male pipe threads.
2. Tighten all threaded joints and make all solder connections.

CPVC Plastic Pipe

1. Clean, prime and cement all joints, following the manufacturer's instructions supplied with the plastic pipe and fittings.

Other, including PEX (Crosslinked Polyethylene)

1. Follow the piping system manufacturer's instructions when using other pipe approved for potable water.

® Teflon is a registered trademark of E.I. Du Pont de Nemours and Company.

Installation Instructions

INSTALL VALVE DRAIN HOSE

1. Measure, cut to needed length and connect the 3/8" drain line (provided) to the Central Water Filtration System valve drain fitting (See Figure 11). Use a hose clamp to hold the hose in place.

NOTE: If codes require a rigid drain line see “Valve Drain requirements" section.

2. Run the drain hose or copper tubing to the floor drain. Secure drain hose. This will prevent the drain line from “whipping" during Clean Rinse cycles. See “Air Gap Requirements" section.

TEST FOR LEAKS

1. Make sure the single bypass valve (or 3 valve bypass, if installed) is in the bypass position, with the handle pushed in (See Figure 11).
2. Fully open the main water supply valve.
3. Briefly open a faucet in the house to refill the plumbing with water.
4. Place the bypass valve(s) in normal operation position, with the handle pulled out (See Figure 11).
5. Check for leaks at all the plumbing connections you made.

IMPORTANT: Start up procedure must be run prior to using any filtered water. Follow the instructions below and on Page 13.

TURN ON THE CENTRAL WATER FILTRATION SYSTEM

During installation, the Central Water Filtration System wiring may be moved or jostled from place. Check to be sure all leadwire connectors are secure on the back of the electronic board (see Figure 27 on Page 22) and be sure all wiring is away from the valve gear and motor area, which rotates during Clean Rinse cycles.

1. Plug the Central Water Filtration System’s transformer into an electrical outlet that is not controlled by a switch.
2. In the display, the words “PRESENT TIME” appear and 12:00 PM begins to flash. Set the clock according to the “Set Time of Day” section on Page 14.
3. Run the start up procedure, as detailed on Page 13.

SINGLE BYPASS VALVE

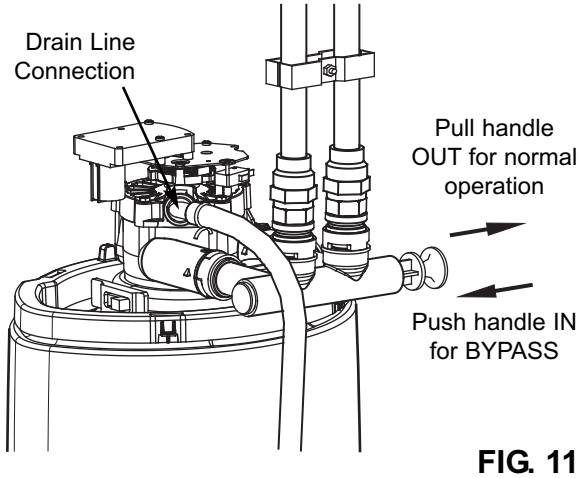


FIG. 11

Start Up Procedure

IMPORTANT:

Run the start up cycle immediately after completing installation, before using any water in the home.

The filtration media in this Central Water Filtration System contains a small number of harmless activated carbon particles generated during shipping that are small enough to exit the system with water flow. It is normal for these particles to cause a temporary discoloration of the water coming out of the system. To avoid discolored water at your home's faucets the system's start up cycle should be initiated to rinse the particles and any discolored water down the drain.

If the Central Water Filtration System is used without first running the start up cycle, you will notice that the water will temporarily have a gray color until the particles have exited the system.

To Initiate the start up cycle:

1. Make sure the drain hose is attached to the Central Water Filtration System and the other end is secured over a drain (see "Install Valve Drain Hose" on Page 12).
2. Make sure bypass valve is in the "service" (open or filtered water) position and the home's water supply is turned on.
3. Press and hold the CLEAN button to initiate the start up cycle. The button can be released when you hear the valve changing position and "RECHARGE NOW" flashes in the display.

During the start up cycle:

Throughout the start up cycle you will hear the valve changing position and notice the flow of water to drain starting and stopping. The start up cycle will take approximately 20 minutes. Avoid using water during this time. Do not set the time of day or press other buttons during the start up cycle, as this will interrupt the start up cycle. Do not unplug the transformer during the start up cycle. If the start up cycle is interrupted, it should be initiated again and allowed to run to completion.

After the start up cycle:

Once the start up procedure completes successfully, it cannot be initiated a second time. The Central Water Filtration System will automatically return to the normal operation position. Once the start up cycle has run, a faucet in the home should be opened and water allowed to run for 10 minutes at the system's rated flow. If, after running the start up cycle, the water still appears discolored, manually run Clean Rinse cycles (See Page 15) until the water is clear.

If the time of day was not set before the start up cycle, set it now (See Page 14).

Check the new plumbing connections and joints once more for leaks.

Programming the Central Water Filtration System

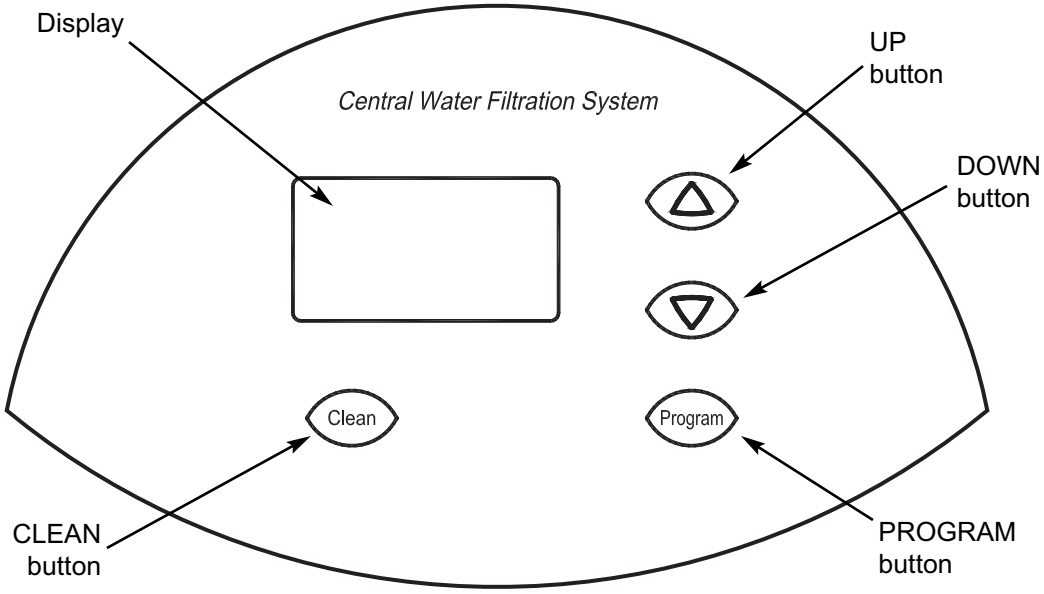


FIG. 12

If you have questions about installation, programming, operating and routine maintenance...

call 1-800-693-1138, Monday - Friday, 7 am to 6 pm, CST.

When the transformer is plugged into the electrical outlet, a model code and a test number (example: J1.4), begin to flash in the faceplate display. Then, 12:00 PM and the words “PRESENT TIME" begin to flash.

NOTE: If “- - - -” shows in the display, press the △ UP or ▽ DOWN button until “CF 8” shows in the display. Then, press the PROGRAM button to set, and change to the flashing “PRESENT TIME" display.

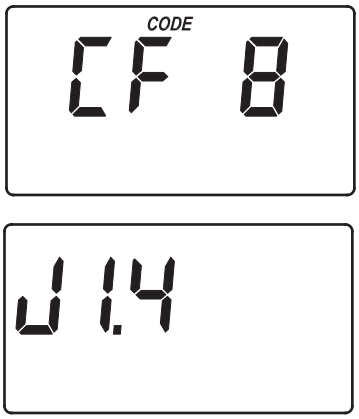


FIG. 13

SET TIME OF DAY

If the words “PRESENT TIME" do not show in the display, press the PROGRAM button until they do.

1. Press the △ UP or ▽ DOWN buttons to set the present time. Up moves the display ahead; down sets the time back. Be sure AM or PM is correct.

NOTE: Press buttons and quickly release to slowly advance the display. Hold the buttons down for fast advance.

2. Press the PROGRAM button a few times, until the time appears on the display, but is not flashing.

FIG. 14

Customizing Features / Options

START A CLEAN RINSE CYCLE

To manually start a Clean Rinse cycle, press and hold the CLEAN button for a few seconds, until “RECHARGE NOW” flashes in the display.

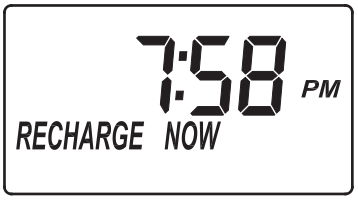


FIG. 15

SET NUMBER OF DAYS BETWEEN CLEAN RINSE CYCLES

By default the Central Water Filtration System will automatically initiate a Clean Rinse every 14 days. This should be sufficient for most applications.

To change the number of days between Clean Rinse cycles:

1. Press the PROGRAM button until “RECHARGE” is shown in the display.
2. Press the △ UP or ▽ DOWN buttons to set the number of days between Clean Rinse cycles (from 1 to 99).
3. Press the PROGRAM button again when complete.

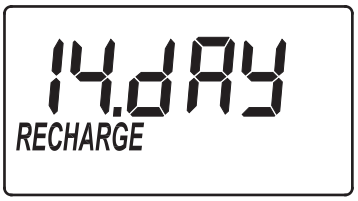


FIG. 16

SET CLEAN RINSE TIME

By default the Central Water Filtration System will Clean Rinse at 1:00 a.m.

To change the Clean Rinse start time:

1. Press the PROGRAM button until “RECHARGE TIME” is shown in the display.
2. Press the △ UP or ▽ DOWN buttons to set the Clean Rinse time. Be sure AM or PM is correct.
3. Press the PROGRAM button again when complete.

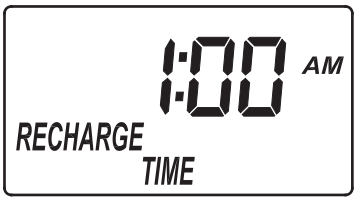


FIG. 17

SET LENGTH OF CLEAN RINSE

By default the Central Water Filtration System’s Clean Rinse cycle will consist of a 2 minute backwash followed by a 1 minute fast rinse. This should be sufficient for most applications.

Increasing the length of Clean Rinse time will increase the amount of water flushed to drain during each Clean Rinse cycle, therefore, these times should only be increased when necessary.

To change the length of the **backwash** part of the Clean Rinse cycle:

1. Press and hold the PROGRAM button for a few seconds, until the “000--” screen appears, as shown at right.
2. Press the PROGRAM button once, so “bA TIME” appears in the display.
3. Press the △ UP or ▽ DOWN buttons to set the length of backwash in minutes.
4. Press the PROGRAM button again when complete.

To change the length of the **fast rinse** part of the Clean Rinse cycle:

1. Press and hold the PROGRAM button for a few seconds, until the “000--” screen appears, as shown at right.
2. Press the PROGRAM button once, so “Fr TIME” appears in the display.
3. Press the △ UP or ▽ DOWN buttons to set the length of fast rinse in minutes.
4. Press the PROGRAM button again when complete.

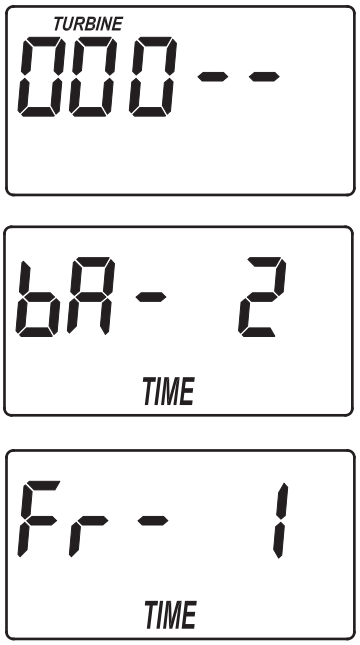


FIG. 18

Customizing Features / Options

OPERATING IN MANUAL CLEAN RINSE MODE

Clean Rinse cycles will run automatically, unless the automatic Clean Rinse function has been disabled. If this function has been disabled, it will be necessary to manually initiate any Clean Rinse cycles. It is recommended that a Clean Rinse cycle should be run at least once each month, or more frequently if necessary.

A manual Clean Rinse mode may be used when a drain (required for automatic Clean Rinse) is not available. However, it is recommended that automatic Clean Rinse be used if the drain requirements can be met.

IMPORTANT: During the Clean Rinse cycle, whether manually or automatically initiated, water will flow from the valve drain port. If a permanent drain line has not been installed, provisions must be made for the drain flow prior to initiating a Clean Rinse cycle.

DISABLING AUTOMATIC CLEAN RINSE

To disable the automatic Clean Rinse function:

1. Press and immediately release the CLEAN button (pressing and holding the button a few seconds would initiate a Clean Rinse cycle).

2. “VAC” should flash in the display, as shown in Figure 19, indicating that the Central Water Filtration System is in the manual Clean Rinse mode (the automatic Clean Rinse function has been disabled).

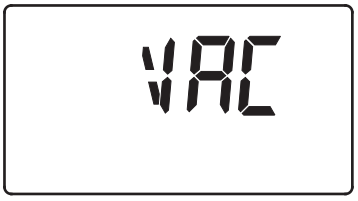


FIG. 19

MANUALLY STARTING A CLEAN RINSE CYCLE

To manually start a Clean Rinse cycle:

1. Press and hold the CLEAN button for a few seconds, until “RECHARGE NOW” flashes in the display, as shown in Figure 20.

2. When the Clean Rinse cycle is complete, the Central Water Filtration System will remain in the manual Clean Rinse mode.

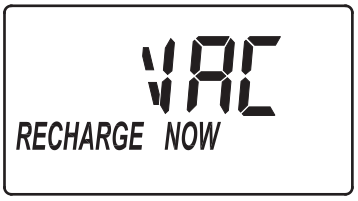


FIG. 20

RE-ENABLING AUTOMATIC CLEAN RINSE

To return the Central Water Filtration System to its automatic Clean Rinse function:

1. Press and immediately release the CLEAN button.

2. The flashing “VAC” on the display should be replaced by the normal time of day screen, as shown in Figure 21.

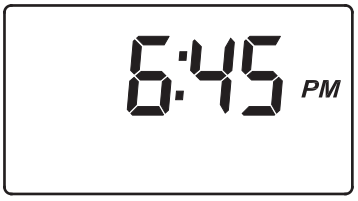


FIG. 21

POWER OUTAGE MEMORY

If electrical power to the Central Water Filtration System is lost, “memory" built into the controller circuitry will keep all settings for up to eight hours. While the power is out, the display is blank and the Central Water Filtration System will not Clean Rinse.

When electrical power is restored, you have to reset the time of day only if the display is flashing. The Clean Rinse TIME never requires resetting unless a change is desired. Even if the clock is incorrect after a long power outage, the Central Water Filtration System works as it should to keep your water treated. However, Clean Rinse cycles may occur at the wrong time of day until you reset the clock to the correct time of day.

NOTE: If the Central Water Filtration System was in a Clean Rinse cycle when power was lost, it will now finish the cycle.

Care of Your Central Water Filtration System

VACATIONS AND EXTENDED PERIODS OF NO WATER USE

If your Central Water Filtration System will not be used for an extended period of time (several months), please follow one of these recommendations:

- If the water supply to the unit is not turned off, and the automatic Clean Rinse function has not been disabled, then no further actions are required.
- If the Clean Rinse cycle cannot be automatically run, due to the water supply being shut off, the transformer being unplugged or the automatic Clean Rinse function being disabled, then it is recommended that a minimum of 2 manually initiated Clean Rinse cycles be performed when the system is placed back into operation (see Start a Clean Rinse Cycle section on Page 15).
- In any installation where there is a possibility of freezing, the Central Water Filtration System should be disconnected and the water drained (see Protect the Central Water Filtration System from Freezing section).

DRAIN ALL WATER FROM CENTRAL WATER FILTRATION SYSTEM

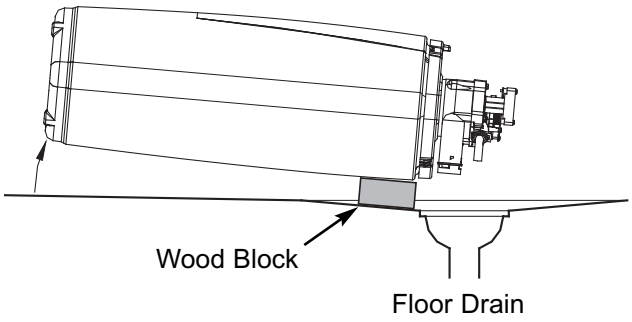


FIG. 22

PROTECT THE CENTRAL WATER FILTRATION SYSTEM FROM FREEZING

If the Central Water Filtration System is installed where it could freeze (summer cabin, lake home, etc.), you must drain all water from it to stop possible freeze damage. To drain the unit:

1. Close the shut-off valve on the house main water pipe, near the water meter or pressure tank.
2. Open a faucet in the filtered water pipes to vent pressure in the unit.
3. Move the stem in the single bypass valve to bypass. Close the inlet and outlet valve in a 3 valve bypass system, and open the bypass valve. If you want water in the house pipes again, reopen the shut-off valve on the main water pipe.
4. Unplug the transformer at the wall outlet. Remove the cover. Take off the drain hose if it will interfere with moving the Central Water Filtration System into position over the drain.
5. Remove the large holding clips at the Central Water Filtration System inlet and outlet. Separate the unit from the plastic installation adaptors, or from the bypass valve.
6. Lay a piece of 2 inch thick board near the floor drain.

⚠ WARNING

Excessive Weight Hazard

Use two or more people to move and install Central Water Filtration System.

Failure to do so can result in back or other injury.

7. Move the Central Water Filtration System close to the drain. Slowly and gently, tip it over until the rim rests on the wood block with the inlet and outlet over the drain. Do not allow the unit's weight to rest on the inlet and outlet fittings or they may break.
8. Tip the bottom of the Central Water Filtration System up a few inches and hold until all water has drained. Leave the unit laying like this until you are ready to use it. Plug the inlet and outlet with clean rags to keep dirt, bugs, etc. out.

Warranty

CENTRAL WATER FILTRATION SYSTEM WARRANTY

Warrantor: Ecodyne Water Systems LLC, 1890 Woodlane Drive, Woodbury, MN 55125

Warrantor guarantees, to the original owner, that:

One Year Full Warranty:

For a period of one (1) year after installation, all parts will be free from defects in materials and workmanship and will perform their normal functions.

For a period of one (1) year after installation, labor to repair or replace any part deemed to be defective in materials or workmanship, will be provided at no additional cost.

Limited Warranties:

Limited ten (10) year warranty, from date of purchase, the fiberglass filtration media tank will not rust, corrode, leak, burst, or in any other manner, fail to perform its proper functions; and that

Limited three (3) year warranty, after installation, electronic control board will be free of defects in materials and workmanship and will perform its normal functions.

If, during such respective period, a part proves to be defective, Warrantor will ship a replacement part, directly to your home, without charge. After the first year, labor necessary to maintain this product is not covered by the product warranty.

If you have questions regarding a warranted product, need assistance with installation or troubleshooting, wish to order a part or report a warranty issue, we are just a phone call away. SIMPLY DIAL 1-800-693-1138, Monday - Friday, 7 am - 6 pm CST, for assistance.

General Provisions

The above warranties are effective provided the Central Water Filtration System is operated at water pressures not exceeding 125 psi, and at water temperatures not exceeding 120°F; provided further that the Central Water Filtration System is not subject to abuse, misuse, alteration, neglect, freezing, accident or negligence; and provided further that the Central Water Filtration System is not damaged as the result of any unusual force of nature such as, but not limited to, flood, hurricane, tornado or earthquake.

Warrantor is excused if failure to perform its warranty obligations is the result of strikes, government regulation, materials shortages, or other circumstances beyond its control.

***THERE ARE NO WARRANTIES ON THE CENTRAL WATER FILTRATION SYSTEM BEYOND THOSE SPECIFICALLY DESCRIBED ABOVE. ALL IMPLIED WARRANTIES, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE, ARE DISCLAIMED TO THE EXTENT THEY MIGHT EXTEND BEYOND THE ABOVE PERIODS. THE SOLE OBLIGATION OF WARRANTOR UNDER THESE WARRANTIES IS TO REPLACE OR REPAIR THE COMPONENT OR PART WHICH PROVES TO BE DEFECTIVE WITHIN THE SPECIFIED TIME PERIOD, AND WARRANTOR IS NOT LIABLE FOR CONSEQUENTIAL OR INCIDENTAL DAMAGES. NO WARRANTOR DEALER, AGENT, REPRESENTATIVE, OR OTHER PERSON IS AUTHORIZED TO EXTEND OR EXPAND THE WARRANTIES EXPRESSLY DESCRIBED ABOVE.**

Some states do not allow limitations on how long an implied warranty lasts or exclusions or limitations of incidental or consequential damage, so the limitations and exclusions in this warranty may not apply to you. This warranty gives you specific legal rights, and you may have other rights which vary from state to state. This warranty applies to consumer-owned installations only.

Manufactured under license by Ecodyne Water Systems, Woodbury, Minnesota.

Troubleshooting

PROBLEM	CAUSE	CORRECTION
Water has black or gray color	(NEW SYSTEM) Start up procedure has not been completed	Run start up procedure (See Page 13) or run consecutive Clean Rinse cycles (See Page 15) until water color returns to normal.
	(NOT A NEW SYSTEM) Normal abrasion of filtration media	Manually initiate a Clean Rinse cycle (See Page 15).
Low water pressure at house faucets	Sediment filter screen is clogged	Manually initiate a Clean Rinse cycle (See Page 15).
		Clean sediment filter screen (See Page 21). If the filter screen is frequently plugging, it may be necessary to adjust the frequency of Clean Rinse cycles.
	Filtration media pores are blocked	Manually initiate a Clean Rinse cycle (See Page 15).
		If the filtration media pores are frequently blocking, it may be necessary to increase the frequency of Clean Rinse cycles.
Water has objectionable taste and/or odor	System is in bypass	Move bypass valve(s) to normal operating (non-bypass) position.
	Filtration media pores are blocked	Manually initiate a Clean Rinse cycle (See Page 15).
		If the filtration media pores are frequently blocking, it may be necessary to increase the frequency of Clean Rinse cycles.
No water flow to drain during Clean Rinse cycle	System is in bypass	Move bypass valve(s) to normal operating (non-bypass) position.
	Drain flow control is plugged	Clean drain flow control (See Page 20).
	Drain hose is plugged or kinked	Straighten drain hose.
	Transformer is unplugged from wall electrical outlet (display will be blank)	Check for loss of power and correct.
Clean Rinse cycle does not run automatically	If display reads “VAC”, then Clean Rinse function has been disabled	Press and release the CLEAN button until display no longer reads “VAC”.
	If display is blank, transformer may be unplugged from wall electrical outlet	Check for loss of power.
Clean Rinse cycle does not run at the programmed time of day	If time display is flashing, then a long power loss caused the clock to lose its time setting	Reset the clock to the correct time of day (See Page 14).
Valve motor stalled or clicking	Motor is defective or inner valve defect is causing high torque on the motor	Replace rotor/seal kit (instructions included with kit).
		Replace motor and switch (See parts list at end of this manual).

Troubleshooting

PROBLEM	CAUSE	CORRECTION
Error Code E1, E3 or E4 appears	Wiring harness or connections to position switch	Replace wiring harness or connection to position switch (See parts list at end of this manual).
	Switch	Replace switch (See parts list at end of this manual).
	Valve defect causing high torque	Replace rotor/seal kit (instructions included with kit).
	Motor inoperative	Replace motor (instructions included with motor)
Error Code E5 appears	Electronic control	Replace electronic control board (PWA) (instructions included with PWA).

Procedure for removing error code from display:

1. Unplug transformer from electrical outlet.
2. Correct problem.
3. Plug in transformer.
4. Wait 6 minutes. The error code will return if the problem was not corrected.

Assistance from customer service may be needed with the following:

PROBLEM	CAUSE	CORRECTION
Water running to the drain (while unit is not in the Clean Rinse cycle)	Inner valve defect causing leak	Replace seals and rotor
Filter media in household plumbing	Crack in distributor or riser tube	Replace distributor or riser tube.

CLEANING THE DRAIN FLOW CONTROL

This procedure is not required if the Central Water Filtration System is operating normally. It should be performed only if a problem with lack of water flow to drain is encountered, as detailed in the troubleshooting table on Page 19.

1. Remove the clip holding the drain fitting into the valve (See Figure 23).
2. Remove the drain fitting from the valve
3. Clear any obstruction.
4. Reinstall the drain fitting into the valve.
5. Reinstall the clip to secure the drain fitting in the valve.

REMOVING DRAIN FITTING TO CLEAN FLOW CONTROL

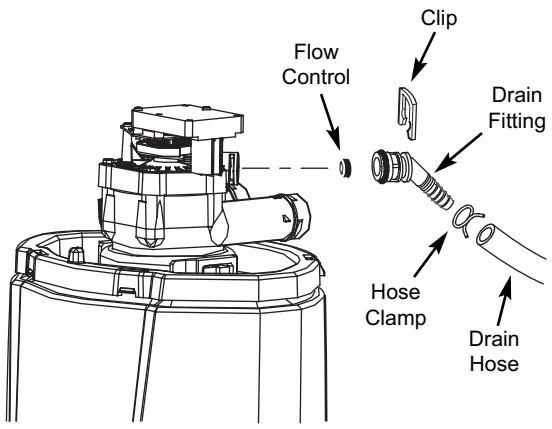


FIG. 23

Troubleshooting

CLEANING THE SEDIMENT FILTER SCREEN

This procedure is not required if the Central Water Filtration System is operating normally. It should be performed only if a problem with low water pressure at household faucets is encountered, as detailed in the troubleshooting table on Page 19.

1. Press and hold the CLEAN button for a few seconds, until "RECHARGE NOW" begins to flash in the display.
2. When water begins to flow from the valve drain hose, place the bypass valve(s) in bypass position (See Figure 11 on Page 12).

IMPORTANT: Be sure to do Steps 1 and 2, as instructed, to relieve water pressure in the tank.

3. Unplug the transformer from the wall electrical outlet.
4. Remove the cover and hang it from the post on front of rim (See Figure 9 on Page 10).
5. Pull the two clips at the inlet and outlet fittings. Slide the adaptors, or bypass valve, from the Central Water Filtration System valve.
6. Remove the clamp retainers (2) and clamp sections (2) that hold the valve to the tank (See Figure 25). Lift upward to remove the valve.
7. Remove the small o-ring (See Figure 26).
8. Remove the screen from the top distributor. Rinse off the screen.
9. Use water to flush the tank top opening. Then, replace the top distributor and o-ring. Be sure to locate o-ring seal correctly (See Figure 26).
10. Install the valve assembly and retaining clamps. Double check to be sure clamps and retainers are securely fastened in place.
11. Referring to the installation instructions, reconnect the Central Water Filtration System to the plumbing. Be sure the plumbing is held firmly in place in the valve inlet and outlet.
12. Return the plumbing bypass valve(s) to normal operating position (non-bypass).
13. Plug the transformer back into the wall electrical outlet. The Central Water Filtration System will complete the Clean Rinse cycle initiated in Step 1, and will automatically return to normal operation.

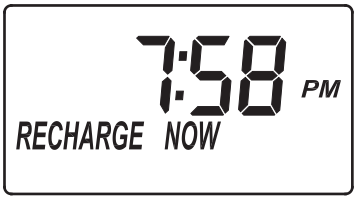


FIG. 24

REMOVING VALVE ASSEMBLY

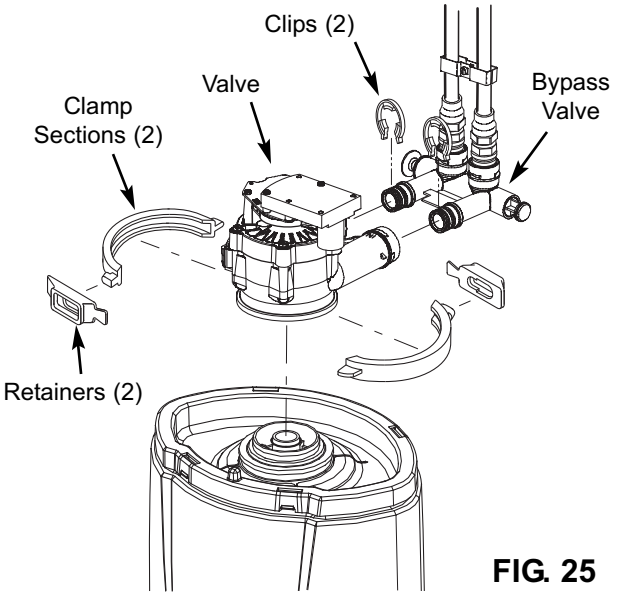


FIG. 25

REASSEMBLING FILTER SCREEN

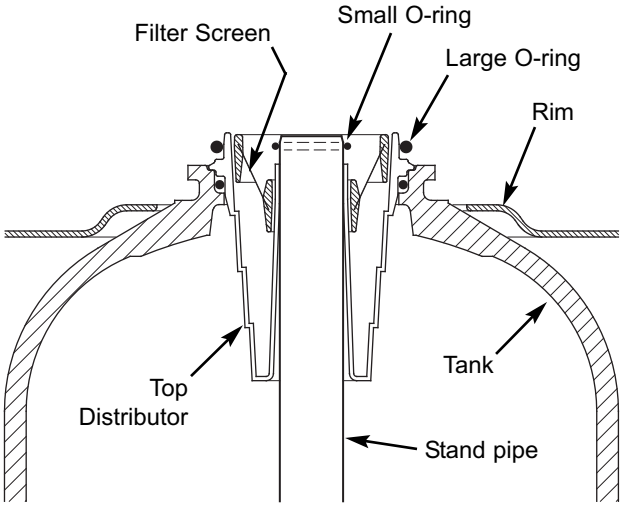


FIG. 26

Wiring Schematic

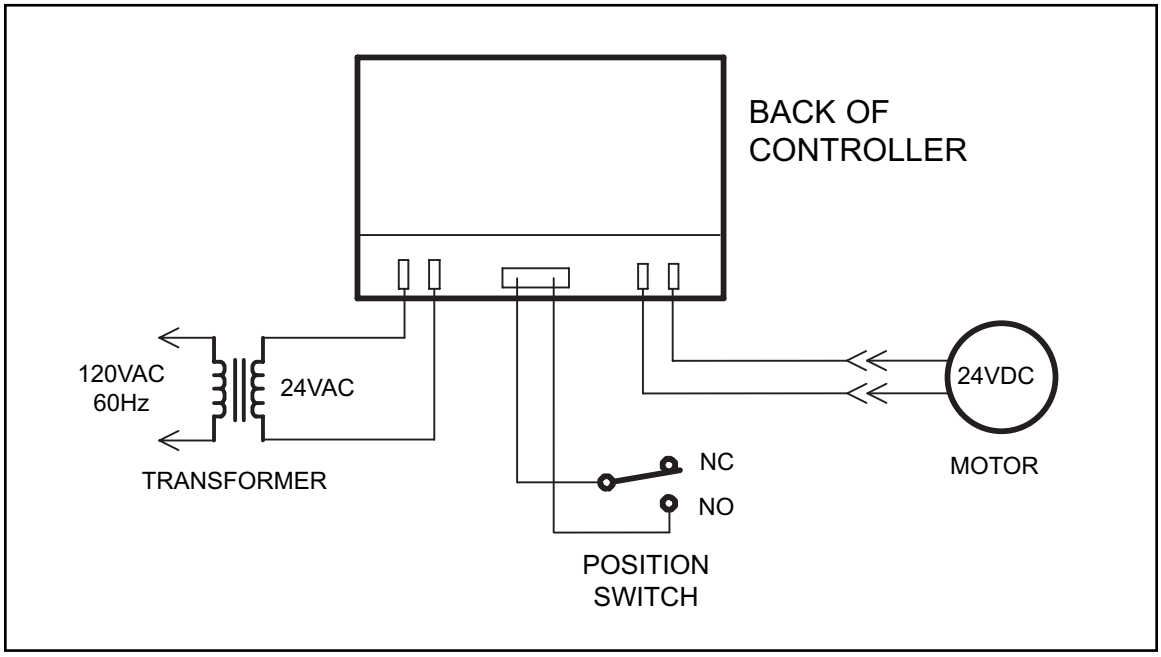


FIG. 27

Specifications

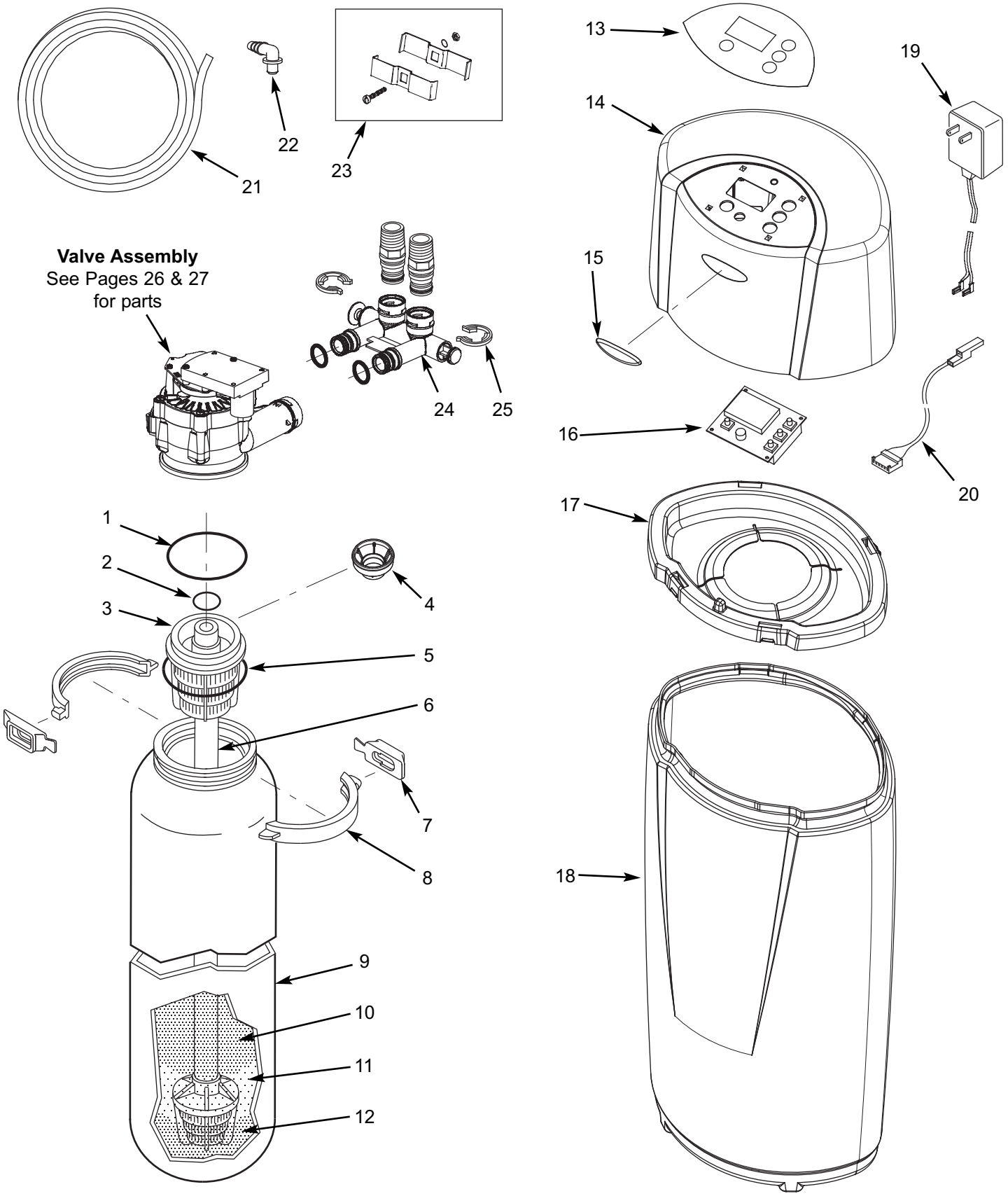
	Model EPWHCW
Rated Service Flow Rate	6.0 gpm
Pressure Drop at Rated Service Flow	10 psig*
Pressure Drop at 9.6 gpm	15 psig*
Water Pressure Limits (minimum / maximum)	30 - 125 psi
Water Temperature Limits (minimum / maximum)	40 - 120 °F
Drain Flow Rate	3.4 gpm
Rated Capacity at Chlorine Concentration** of: 0.50 ppm 0.75 ppm 1.0 ppm 1.5 ppm 2.0 ppm	2,280,000 gal.* 1,520,000 gal.* 1,140,000 gal.* 760,000 gal.* 570,000 gal.
Sediment Removal with 30-40 micron particle size	95% or more
Sediment Removal with 40-50 micron particle size	99% or more

* From independent laboratory test data.

** Typical residential chlorine concentration is 0.5 to 1.0 ppm.

Notes

Central Water Filtration System Exploded View



Central Water Filtration System Parts List

Key No.	Part No.	Description
■	7290876	Assembly, Replacement Mineral Tank, w/media & associated components (Includes Key Nos. 1 through 12)
1	7170296	O-Ring, 2-7/8” x 3-1/4”
2	7170254	O-Ring, 13/16” x 1-1/16”
3	7077870	Top Distributor
4	7265025	Filter Screen
5	7170270	O-Ring, 2-3/4” x 3”
6	7105047	Repl. Bottom Distributor
7	7088033	Retainer Clip (2 req.)
8	7176292	Clamp Section (2 req.)
9	✱	Mineral Tank, 8” x 25”
10	✱	Activated Carbon, 10 lbs.
11	✱	Filter Sand, 5 lbs.
12	✱	Gravel, 6 lbs.
13	7290402	Faceplate Decal
14	7302893	Cover (order decal above and badge below)
15	7303077	EcoPure Badge
16	7290729	Repl. Electronic Control Board (PWA)
17	7302877	Rim
18	7302924	Outer Shroud Tank
19	7275907	Transformer
20	7259927	Wire Harness
21	7290509	Drain Tube, 10 ft.
22	1103200	Tube Adaptor (Elbow)
23	7248706	Grounding Kit
24	7278434	Bypass Valve
25	7116713	Clip (2 req.)
■	7306774	Owner’s Manual

■ Not illustrated.

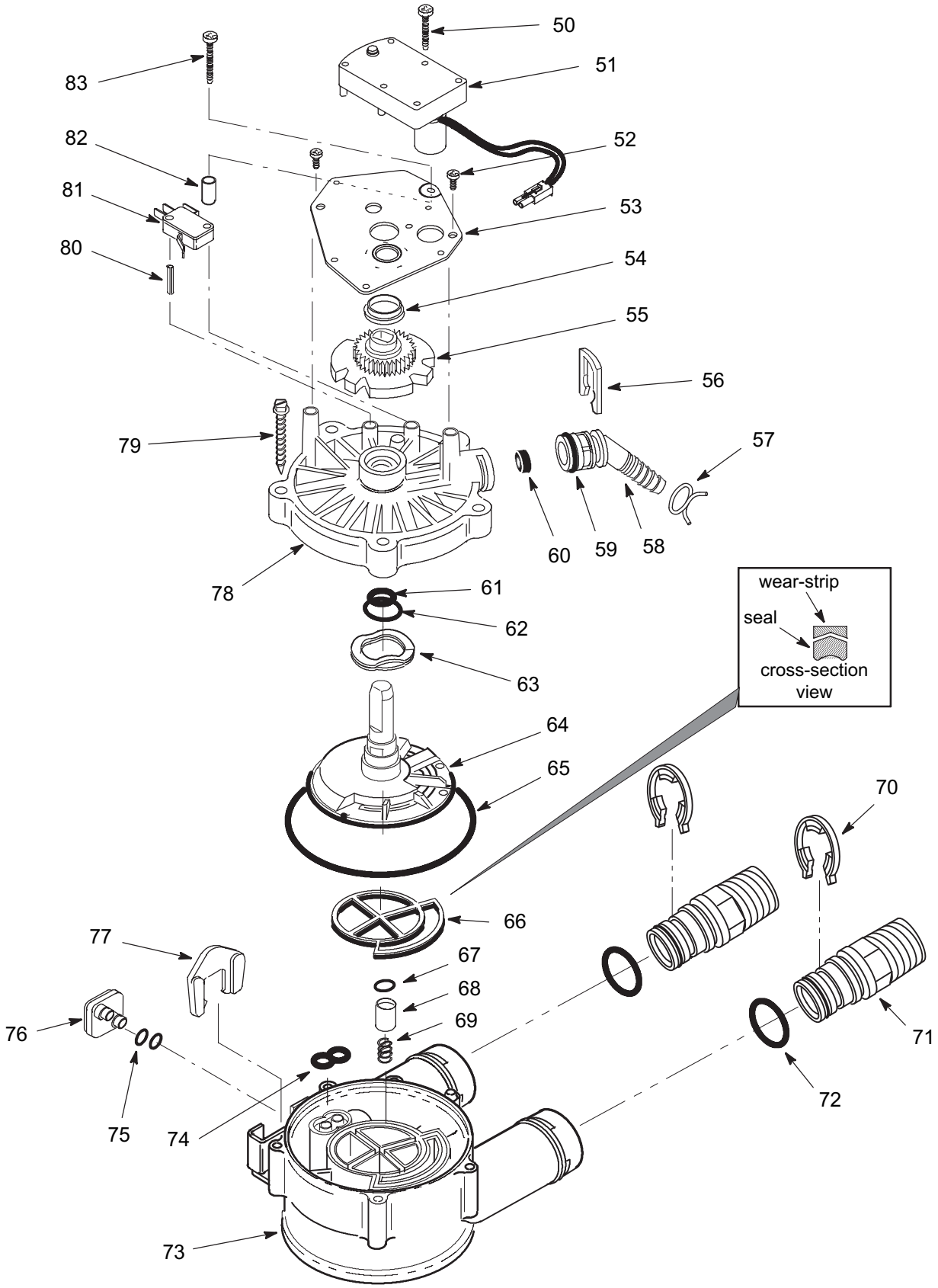
✱ Mineral Tank and media can only be purchased as part of the Replacement Mineral Tank Assembly (See top of list).

To order repair parts call toll free 1-800-693-1138, Monday - Friday, 7 am - 6 pm CST.

Manufactured and warranted by
Ecodyne Water Systems LLC
1890 Woodlane Drive
Woodbury, MN 55125

Questions? Visit www.ecopurewaterproducts.com or call Toll Free 1-800-693-1138

Valve Assembly Exploded View



Valve Parts List

Key No.	Part No.	Description
50	7224087	Screw, #8-32 x 1” (2 req.)
51	7286039	Motor (incl. 2 ea. of Key No. 50)
52	0900857	Screw, #6-20 x 3/8” (2 req.)
53	7231385	Motor Plate
54	0503288	Bearing
55	7284964	Cam & Gear
56	7142942	Clip, Drain
57	0900431	Tubing Clamp (2 provided)
58	7024160	Adapter, Drain Hose
59	7170327	O-Ring, 5/8” x 13/16”
60	7290410	Flow Plug
61	7170238	O-Ring, 7/16” x 5/8”
62	7170212	O-Ring, 3/4” x 15/16”
63	7082087	Wave Washer
64	7199232	Rotor & Disc
65	7170246	O-Ring, 3-3/8” x 3-5/8”
66	7134224	Rotor Seal
67	7170204	O-Ring, 3/8” x 9/16”
68	7092642	Plug, Drain Seal
69	7129889	Spring
70	7116713	Clip (2 req.)
71	7278442	Installation Adapter (2 req.)
72	7170288	O-Ring (2 req.)
73	7082053	Valve Body
74	7081764	Seal, Nozzle & Venturi
75	7170319	O-Ring, 1/4” x 3/8” (2 req.)
76	7100940	Plug, Aspirator Port
77	7081201	Retainer, Nozzle & Venturi
78	7085263	Valve Cover
79	7074123	Screw, #10-14 x 2 (5 req.)
80	7077472	Expansion Pin
81	7030713	Switch
82	7117816	Spacer
83	7070412	Screw, #4-24 x 1-1/8”, Flat Head

To order repair parts call toll free 1-800-693-1138, Monday - Friday, 7 am - 6 pm CST.

Manufactured and warranted by
Ecodyne Water Systems LLC
1890 Woodlane Drive
Woodbury, MN 55125

Questions? Visit www.ecopurewaterproducts.com or call Toll Free 1-800-693-1138